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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,448	09/01/2006	Johann Seitz	32860-001081/US	1471
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EXAMINER				
KITOV, ZEEV V				
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2836				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/591,448

**Applicant(s)**

SEITZ, JOHANN

**Examiner**

ZEEV KITOV

**Art Unit**

2836

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3 - 5, 7 - 11, 13 - 15, 17 - 21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3 - 5, 7 - 11, 13 - 15, 17 - 21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Examiner acknowledges a submission of the amendment and arguments filed on May 08, 2009. Claims 1, 8, 11, 15 and 18 are amended. New Claim 21 is added. A new Office Action follows.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Delhomme (EP 0165864). Regarding Claim 1 and 11, Delhomme discloses following: a protective device for a load branch circuit, comprising: a first protective element, i.e. triacs (10 and 16) to provide motor protection (1) and inherently a line protection; and an integral second protective element in series with the first protective element and located on a line side of the first protective element, including a fuse (12), to provide short-circuit protection of the first protective element and the motor, wherein the second protective element is designed to provide overload protection for an electronic switching device, i.e., the electronic switching device, i.e. voltage converter including an inductor (2) with four switches (3 – 6) connected in a bridge configuration, being connected in series with the first protective element, and wherein the first protective element includes an overload relay (10 and 16) in series with the second protective element (12). The

overload relay protects all the listed elements against over-load, i.e. over-currents including short-circuit (see Abstract).

Regarding Claim 11, Delhomme discloses an equivalent first means for providing motor protection and line protection, i.e. the triacs (10 and 12); and an equivalent integral second means, i.e. fuse (12) for providing short-circuit protection of the first protective element and the motor, wherein the second equivalent means is designed to provide overload protection for an electronic switching device, the electronic switching device being in series with the first equivalent protective means, and wherein the first equivalent means includes an overload relay (10, 16) in series with the second protective means (12).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delhomme in view of current design practice. As per Claim 7, it requires a trip response of the first protective element, i.e. circuit breaker, being coordinated with the rating of a protected switching device. Examiner takes an Official Notice, that such requirement is a normal part in the rules of protection system design, since otherwise if it is not coordinated, i.e. if the trip threshold is set higher than a maximum current that the

switch can withstand, the switching device will be damaged thus defeating a purpose of use of the protection system. It would have been obvious to one of ordinary skill in the art at the time the invention was made to set a threshold of the protection device such that it would effectively protect all the elements of the circuit.

As per Claim 17, the same considerations as in Claim 7 rejection are valid with respect to the trip response of the first equivalent means (see Claim 7 rejection above).

Claims 5, 10, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delhomme in view of Scoggin (US 6,853,289). Regarding Claims 5, 10, 15 and 20, Scoggin discloses an auxiliary switch (Q1, Q2, D3, and D4 in Fig. 17) used to signal the status of the fuse (362 in Fig. 16, col. 13 -line 25 - col. 14, line 20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the auxiliary switch and indicator to indicate the status of the fuse, because it is necessary to attract attention of maintenance personnel to take care of a fault problem when it is necessary.

Regarding Claims 15 and 20 Scoggin discloses an equivalent means for signaling the status of the fuse (see above Claims 5 and 10 rejections).

Claims 3, 4, 9, 13, 14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delhomme in view of Frank (US 2,324,852). Regarding Claims 3, 4, 13 and 14, Delhomme discloses the fuse (12). However, it does not disclose the fuse being transferable to maintenance position. Frank discloses a safety switch (Fig. 1)

used with the fuse box (Fig. 10). According to Frank, in this structure the switch handle may be locked against movement out of the open circuit position, while at the same time permitting the covers 38 or 28 to be moved for exposing the interior of the switch for inspection, fuse replacement, or maintenance (page 2, right column, lines 57 - 68). It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the Delhomme system according to teachings of Frank, i.e. providing a fuse box and a locking mechanism to the fuse box in order to secure safe operation during fuse replacement or maintenance.

Regarding Claims 9 and 19, Frank discloses a safety switch (Fig. 1) used with the fuse box (Fig. 10). According to Frank, in this structure the switch handle may be locked against movement out of the open circuit position, while at the same time permitting the covers 38 or 28 to be moved for exposing the interior of the switch for inspection, fuse replacement, or maintenance (page 2, right column, lines 57 - 68). It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the Delhomme system according to teachings of Frank, i.e. providing a locking mechanism to the fuse box in order to secure safe operation during fuse replacement or maintenance.

Claims 8, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delhomme in view of Bueher et al. (US 5,223,681). Regarding Claims 8 and 18, requiring the switching device and protective device having widths of the same dimensions, it is actually requirement of widely used modular design approach. Buehler

et al. teaches a modular design approach, which according to him (col. 2, lines 51 – 56), provides following advantages: making easier future modifications, allowing small modifications to existing modules to fit customers needs, adding or subtracting modules to fit the customer's needs, taking module out, modify it, insert and as a result having a totally different circuit breaker. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified the Delhomme system by arranging the main elements of the system in a modular form, i.e. having the same mounting dimensions because (1) as well known in the art, the circuit breakers today are mostly manufactured with standard modular dimensions when all the modules with rare exception have the same mounting dimensions and (2) exercising the modular approach will bring the recited above advantages.

Regarding Claim 21, Delhomme discloses the protective device and the switching device. Bueher et al. teaches the modular structure of the protective device. As to the protective device being pluggable, according to online encyclopedia Answers.com and Wikipedia, "In systems engineering, modular design — or "modularity in design" — is an approach that subdivides a system into smaller parts (modules) that can be independently created and then used in different systems to drive multiple functionalities. Besides reduction in cost (due to lesser customization, and less learning time), and flexibility in design, modularity offers other benefits such as augmentation (adding new solution by merely plugging in a new module), and exclusion". Accordingly, modular design assumes easy replacement of modules by plugging them in and out. It would have been obvious to one of ordinary skill in the art at the time the

invention was made to have further modified the Delhomme in view of Bueher et al. modular protective device arranging the device as being pluggable into the base device i.e. into the switching device of because (1) the modular design of the protective mechanism brings recited above advantages as stated by Bueher, and (2) the module being pluggable is well known and widely used feature of the module, which facilitates the modular design advantages.

### ***Response to Arguments***

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeev Kitov whose current telephone number is (571) 272 - 2052. The examiner can normally be reached on 8:00 – 4:30. If attempts to reach examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barrie can be reached on (571)-272-7492. The fax phone number for organization where this application or proceedings is assigned is (571) 273-8300 for all communications.

/Z. K./  
Examiner, Art Unit 2836  
8/5/2009  
/Stephen W Jackson/  
Primary Examiner, Art Unit 2836